



# ***NASA Education Conference Industry Perspective***

**June 12, 2003**

*Where there is no vision,  
the people perish.*

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# Overview

- ◆ Outstanding programs and significant funding are in place to support education of students and creation of the future workforce
- ◆ Since “A Nation at Risk” was published in 1983, other than scattered islands of excellence, there has been no statistical improvement in literacy and math scores in the US

*Secretary of Education Rod Paige*

- ◆ The issue is not a shortage of labor, but rather a shortage of people with the right skills set
- ◆ Students only spend 12% of their time in school
- ◆ A different approach is required if we are to educate and train our youth to become the workforce of the future

# Rapid Technology Changes and Future Jobs

- ◆ *The fastest growing occupations through 2008 will be in technology and information management.*

Bureau of Labor Statistics

- ◆ *“60 percent of all future jobs require training that only 20 percent of current workers possess.”*

Richard Judy – Discovery Institute

Footnote: From Presentation By David Vance, Caterpillar University



# Uncertainty Our Shared Challenge

***“We are attempting to educate students today so that they will be ready to solve future problems that have not yet been identified using technologies not yet invented based on scientific knowledge not yet discovered.”***

**Joseph Lagowski  
University of Texas at Austin**

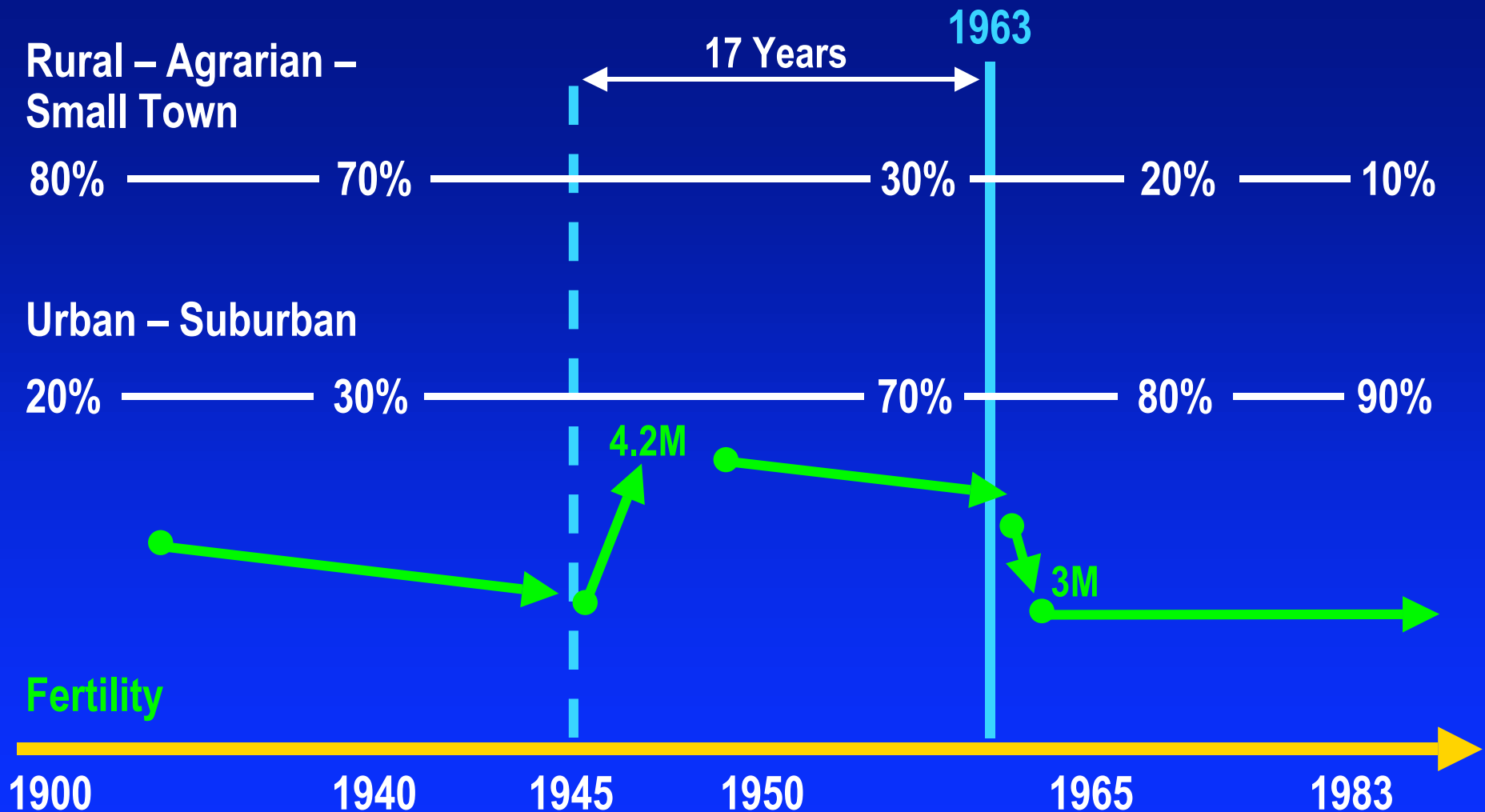




# **Current National Education Key Performance Indicators**

- ◆ **U.S. high school drop out rates = 10.9% (This equates to 1300 students per day dropping out of the system)**
- ◆ **Education spending soared since 1984, but reading scores have stayed static, significantly below “proficient”**
- ◆ **US TIMSS math and science scores are 18th and 19th in the world.**
- ◆ **Nearly half of all US college students take at least one remedial class; students pay \$12 million a year for courses that don’t apply towards graduation**

# Timeline of Cultural Change



# Many People Have Their Own Programs to Help



# Where else are young people getting an education?

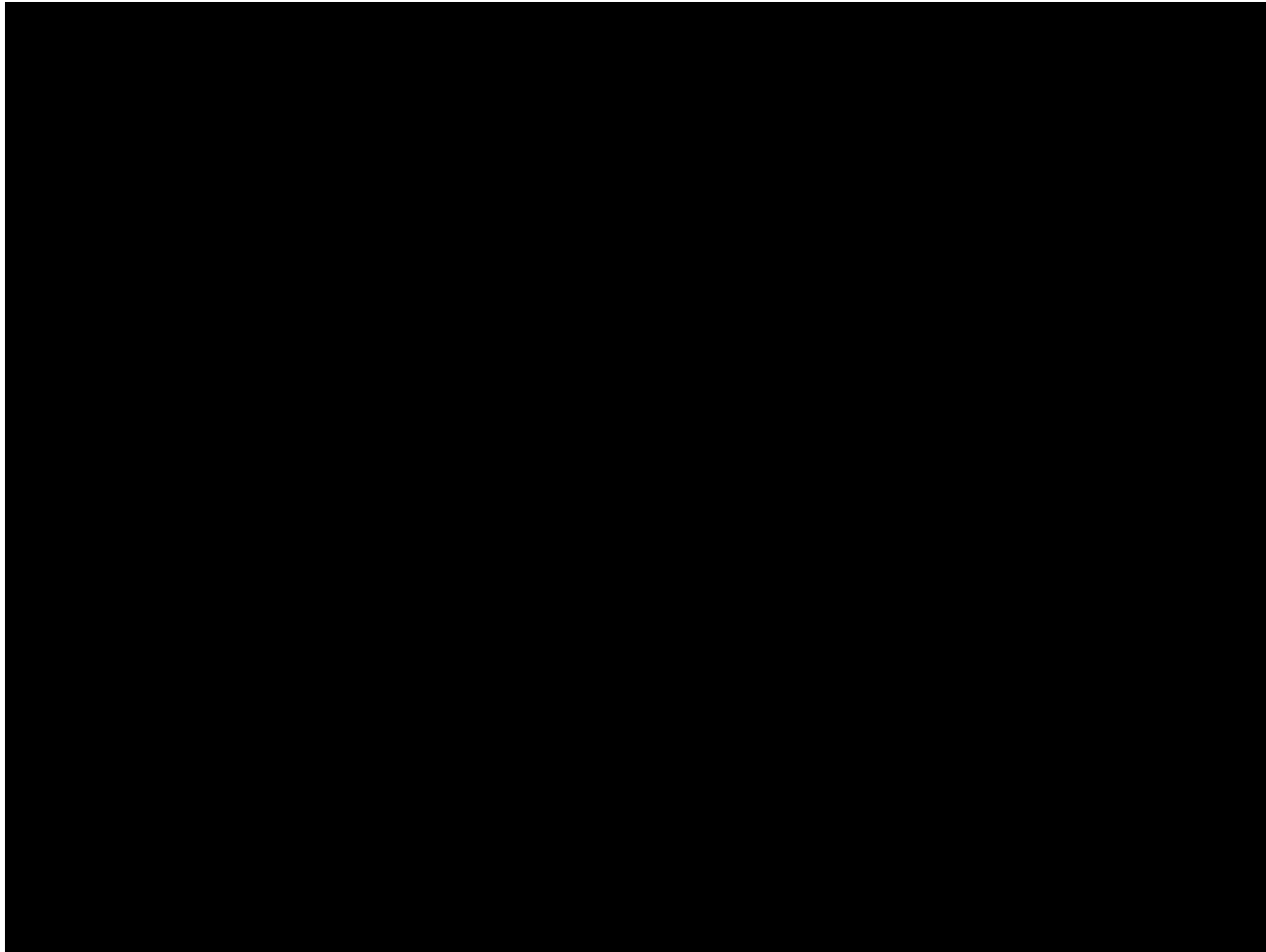
- ◆ “From the time a child is born to the time they graduate from high school, they spend 12% of their time in school.”







# **“Merchants of Cool”**





## **Significant Stakeholder Involvement Underway**

- ◆ **America's Promise**
- ◆ **American Bankers' Assoc.**
- ◆ **American Institute of Aeronautics and Astronautics**
- ◆ **American Computing Machinists**
- ◆ **American Media Literacy Assoc.**
- ◆ **National Association of Manufacturing**
- ◆ **Lego - Dacta Int.**
- ◆ **NASA Connect**
- ◆ **Los Angeles County Office of Education Science Teachers**
- ◆ **House Science Committee Staff**
- ◆ **National Academy of Pediatrics**
- ◆ **Whyville.Com**
- ◆ **The New Mexico Media Literacy Project**
- ◆ **Orange County Business Council**
- ◆ **Center for Disease Control**
- ◆ **International Space University**
- ◆ **McGraw-Hill Company**
- ◆ **Aviation Week & Space Technology**
- ◆ **International Economic Development Council**
- ◆ **Aviation High School**
- ◆ **National Science Teachers' Assoc. – Gerald Wheeler, Exec. Director**
- ◆ **Foundation for Self-Esteem, Larry Price, Executive Director**
- ◆ **Academy of Television Arts and Sciences**
- ◆ **National Association of Engineers**





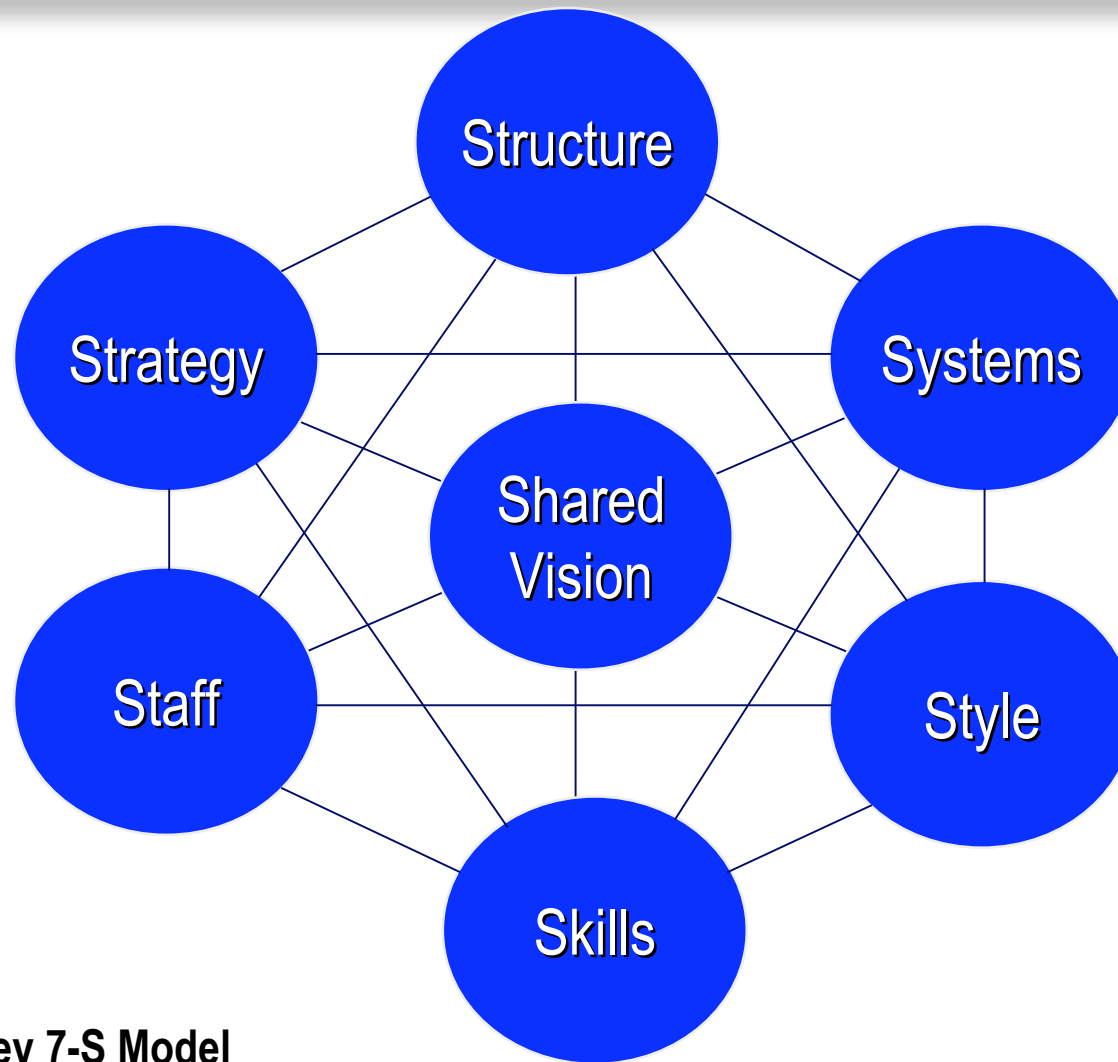
## **Significant Stakeholder Involvement Underway**

- ◆ **Entertainment Industries Council**
- ◆ **California Space Authority**
- ◆ **California Engr'g. Federation**
- ◆ **California State PTA**
- ◆ **Related PBS Affiliates**
- ◆ **Touch the Future Foundation**
- ◆ **European Space Agency**
- ◆ **Alcoa Fasteners**
- ◆ **Colorado Technical University,  
Bruce Hanson, Professor of  
Management**
- ◆ **California Institute for  
Telecommunications and  
Information Technology**
- ◆ **National Policy Association**
- ◆ **California School Boards Assoc.  
David Pollack, President 2003-04**
- ◆ **University of Southern California  
Annenberg School of  
Communication and School of  
Engineering**
- ◆ **Yuri's Night – Space Generation  
Foundation**
- ◆ **Women's Inc.**
- ◆ **Creative Artists Agency**
- ◆ **American Association for the  
Advancement of Science**
- ◆ **Workforce Investment Boards**
- ◆ **Future Scientists and Engineers  
of America**

# Many People Have Their Own Programs to Help

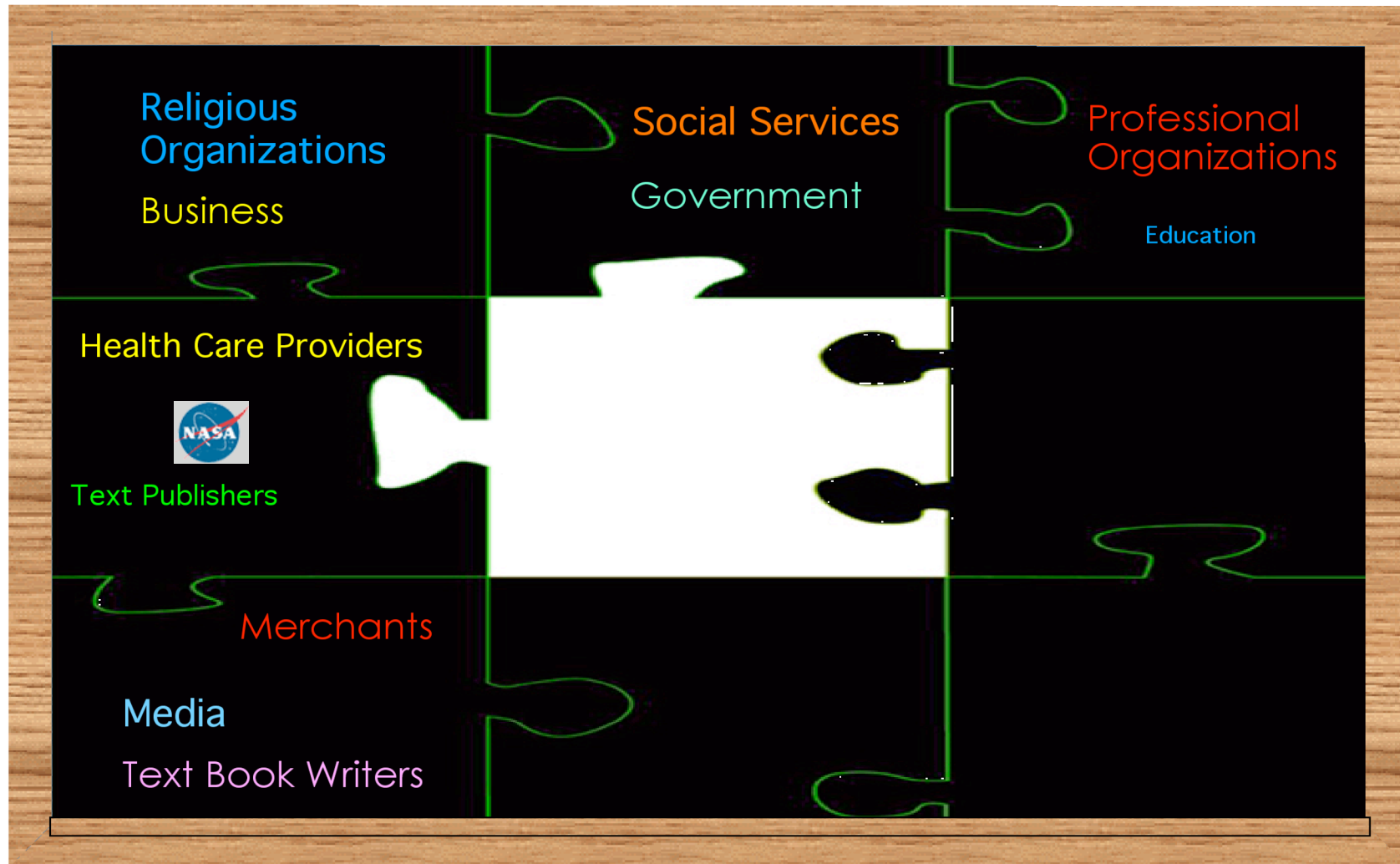


# Key Elements Requiring Alignment



**Based on McKinsey 7-S Model**

# Big “E”





# Overarching Strategy

- ◆ **Gather wide range of information**
  - Both in and outside of Aerospace industry
  - Utilize consultant as expert in areas of communication and education
- ◆ **Present observations and top level recommendations**
  - Presentations
  - White paper
- ◆ **Build constituency base for action**
  - Big “E” stakeholders
  - Professional associations
- ◆ **Provide on-going leadership**



The title slide features a background image of a blue and white globe with glowing blue lines and arrows, suggesting a global or technological theme. The title 'Stakeholder Communities' is centered in a large, bold, yellow font.

# **Stakeholder Communities**

- 1. Government – federal, state, county, local**
- 2. Education – K-12, community college, college/university**
- 3. Health – child development, research**
- 4. Media**
  - Information – print, broadcast, electronic**
  - Performance – TV/film, music, stage, fine arts**
- 5. Business – products and services**
- 6. Community/Citizens – those involved with education and workforce development, but not included in other communities**





# Action Plan

- 1. Identify and Attract Stakeholder Community Leaders**
- 2. Agree on Common Language and Shared Value (Common Ground)**
- 3. Agree on Shared Vision, Scope of Work and Measures of Success**
- 4. Agree on Stakeholder Roles and Responsibilities**
  - ♦ Including key stakeholder interfaces
- 5. Agree on Resource Requirements**
- 6. Establish & Implement Management Process**
  - ♦ Cost, Schedule, Technical Performance Measurement
  - ♦ Issue Identification and Resolution Process
  - ♦ Risk Identification and Mitigation Plan



## The Cold War Is Over But The War For Talent Is On

*“It would be the ultimate irony if those of us who created the technologies that unified the world through communication found ourselves unable to communicate our own message to the world.”*

Gen. Thomas Moorman  
AIAA Space 2000 Conference